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Docket Control Arizona Corporation Commission 1200 West Washington Street Phoenix, Arizona 85007

THOMAS A. LOQUVAM

Associate General Counsel Pinnacle West Capital Corp., Law Department Mail Station 8695 PO Box 53999 Phoenix, Arizona 85072-3999 Tel 602-250-3616 Thomas.Loquvam@pinnaclewest.com

Arizona Corporation Commission DOCKETED

OCT 07 2014

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RE:

Arizona Public Service Company (APS or Company) Supplemental Application (Utility-Owned DG)

APS 2014 RES Implementation Plan

Docket No. E-01345A-13-0140

On July 28, 2014, APS submitted a supplemental filing to the above-mentioned docket requesting approval of a utility-owned distributed generation program. The program would involve installing 20 MW of rooftop solar at residential customer sites in the Company's service territory. This program was proposed as an alternative to the Company's April 15 request regarding a 20 MW utility-scale solar facility at the Company's Redhawk facility. Both programs were proposed to ensure that APS complies with its 2015 renewable energy requirement established in Decision No. 71448.

Since the time of the Company's supplemental filing, APS has had conversations with Commission Staff, RUCO, local solar developers, stakeholders, and intervenors regarding the proposed 20 MW DG program. Based on these conversations, APS developed a program description that provides supplemental information about the Company's proposal so that the Commission and other stakeholders can further understand the benefits of the program to APS customers and to Arizona-based solar installers. That program description is attached to this letter.

The program description addresses various aspects of the proposal, such as customer eligibility and acquisition, customer participation requirements, cost estimates, and requirements for participation in the Request for Proposal that the Company will issue upon approval of the program. APS's statements regarding the proposed utility-owned DG program have been consistent: the program will ensure that the Company meets its compliance requirements, the program will make rooftop solar available to many APS customers who are not currently being served by the Arizona solar market, and the program will be open to all Arizona-based solar companies for both installation and operation and maintenance contracts.

Because APS has been clear and consistent about its proposal, the Company was disappointed to read the September 16 letter from the Arizona Solar Energy Industries Association's (AriSEIA) board questioning APS's ability to fairly administer this proposed program. This letter alleges that APS's shared vision with the Arizona Solar Deployment Alliance (ASDA) of more solar for Arizona will somehow prevent local installers not affiliated with ASDA from participating in the proposed program.

AriSEIA makes this allegation without any basis and ignoring that an independent monitor will ensure the integrity of the entire selection process. On June 17, 2014, APS notified the Commission that it selected Merrimack Energy Group, Inc., a nationally-respected firm, to monitor every aspect of the solar-installer selection process. If the program is approved, Merrimack will ensure that APS selects installers who can provide the highest quality service at the lowest cost. And Merrimack's independent monitor report will be submitted to the Commission, guaranteeing that the selection process is governed by the fair and transparent regulatory authority of the Commission.

As the first step in the preparation of selecting solar installers for this program, APS recently issued a Request for Information (RFI) explaining the general scope of the program and setting forth the basic requirements installers must meet to participate in the RFP (for example, sufficient ability to meet program deadlines, ability to fulfill warranty terms, and appropriate licensing and bonding). In addition, a bidder's conference call was held to allow interested parties to ask questions regarding the program. Of the 70 solar installers that expressed interest in participating in the Company's program, 27 responded to the RFI. Six of those respondents—in direct contrast to the accusations of AriSEIA's board—are actual members of AriSEIA.

AriSEIA's board sought to limit the amount of solar in Arizona when it filed a motion to dismiss APS's proposal in August of this year. When that attempt failed, the board of AriSEIA felt it necessary once again to provide comments suggesting that the only solar market model it will support in Arizona is a "solar for themselves" model. They did this even though APS's proposal will not only increase solar deployment and provide customers with another option to go solar, but will also keep solar jobs and money in Arizona.

The fact is that APS's innovative program is intended to provide more solar opportunities for its customers. And customers are interested. More than 1,200 APS customers have already expressed interest in the program, which will provide customers with sustainable, quality rooftop solar installed by reputable solar companies under the highest standards.

APS is excited about the potential to offer this proposed option to customers and we hope that this informational filing is helpful as the Commission considers the Company's application.

Sincerely

Taomas A. Loquvam

c: Chairman Bob Stump
Commissioner Gary Pierce
Commissioner Brenda Burns
Commissioner Susan Bitter Smith
Commissioner Robert L. Burns
Mr. Steve Olea
Parties of Record

Copies of the foregoing delivered/mailed this 7th day of October, 2014, to:

Janice Alward Legal Division Arizona Corporation Commission 1200 W. Washington Phoenix, AZ 85007

C. Webb Crockett Attorney Fennemore Craig 3003 N. Central Avenue, Suite 2600 Phoenix, AZ 85012-2319

Garry Hays Attorney for AZ Solar Deployment Alliance Law Offices of Garry D. Hays, PC 1702 E. Highland Ave, Suite 204 Phoenix, AZ 85016

Steve Olea Utilities Division Arizona Corporation Commission 1200 W. Washington Phoenix, AZ 85007

Daniel Pozefsky Chief Councel RUCO 1110 W. Washington Phoenix, AZ 85007 Bradley Carroll
Tucson Electric Power Company
88 East Broadway Blvd.
Mail Stop HQE910
Tucson, AZ 85701

Lyn Farmer Administrative Law Judge Arizona Corporation Commission 1200 W. Washington Phoenix, AZ 85007

Mark Holohan Chairman AriSEIA 2221 W. Lone Cactus Drive, Suite 2 Phoenix, AZ 85027

Michael Patten Attorney Roshka DeWulf & Patten, PLC One Arizona Center, 400 E. Van Buren Street, Suite 800 Phoenix, AZ 85004

Court Rich Attorney Rose Law Group, P.C. 7144 East Stetson Drive, Suite 300 Scottsdale, AZ 85251

Arizona Public Service Company

Project Description

Proposed AZ Sun Residential Rooftop Project

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AZ SUN Residential PV Rooftop Project

Progres Description

The 20 MWdc AZ Sun Residential PV Rooftop Project was submitted for approval to the Commission on July 28, 2014 under Docket No. E-01345A-13-0140 to help APS meet the 2015 renewable energy target established by Decision No. 71448. This project was filed as an alternative to the previously-proposed 20 MWac large scale Redhawk solar facility filed in the same docket on April 15, 2014.

If approved, this DG project would involve APS deploying photovoltaic systems, sized between 4kWdc to 8kWdc, on approximately 3,000 residential customer rooftops in APS's service territory. The systems would be built and operational by the end of 2015 in order to meet Settlement requirements. They would primarily be awarded to customers on a first come, first served basis, at no upfront cost to the participating customer. Nor would participation require a minimum credit score, as is the case with leased systems. As a result, this project would make rooftop solar available to many more APS customers who may not have options to install in the current market.

The project would also allow APS to deploy DG systems on the homes of low income customers, as well as strategically target certain specific high load feeders. The systems will be installed facing west and southwest (between 225 and 270 degrees) in order to maximize the solar production during times of peak customer demand.

Under this program, APS has the unique opportunity to better understand the full impacts of DG on its grid by pairing these PV systems with advanced technologies for grid management. Unlike standard inverters installed today, APS will utilize advanced inverters. This will allow APS to explore new inverter capabilities such as voltage ride-through, reactive power support, power factor correction or voltage support, as well as how they can be integrated into utility operational practices. Doing so will help ensure safe and reliable power delivery to APS customers now and in the future. Specific feeders are being identified where advanced inverter features may eventually be demonstrated to alleviate localized power quality issues.

The systems will be interconnected on the utility side of the meter, meaning the energy they produce will feed directly to the electric grid. While these systems will typically produce power that will serve a portion of the energy needs of a local area rather than a single property, participating customers will receive a fixed \$30 monthly bill credit in exchange for allowing APS to "rent" their rooftop (much like APS would pay any third party to lease land for the purpose of siting generation).

The systems will be installed by Arizona-based installers, chosen through a competitive RFP process, to keep the money and jobs within the state and help Arizona maintain its leadership in the solar industry. To ensure fairness, an independent monitor will watch over and report to the Arizona Corporation Commission on the integrity of APS's selection process. The systems will be owned by APS, who will also be responsible for the O&M for the 20 year term of the project.

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In an effort to provide the most cost-effective option for deployment of the residential rooftop program, APS proposes an initial capital cost cap of \$57 million. Actual installed costs will be

established through a competitive Request For Proposal (RFP) process; however, this initial capital cost cap will also include all inspections, system installations, and the initial warranty as described on page 7 of this description. The total revenue requirements for the program will include operation and maintenance support, roof lease payments, and customer awareness and marketing expenses.

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All APS customers with qualifying rooftops are eligible to participate in the program. Qualifying rooftops that are west to southwest facing (between 225 and 270 degrees) will be prioritized for the maximum production during peak demand times, when their output is needed most. The requirements for program participation include the following parameters:

- Customer's roof must be structurally sound (an inspection will be done on each participating rooftop);
- Roof space must allow for at least a 4kW system (roughly 400 square feet) without shading or other obstructions;
- Single family homes;
- Customer account must be in good standing;
- Homeowner must accept a 20 year easement on their roof (If the home is leased, the owner of the home must sign the easement. The easement remains with the home. The terms of the easement are in effect for any new homeowners during the 20 year period.);
- Customer/homeowner must agree to allow APS to share with the third party installer certain customer information for the purpose of installing an APS owned PV system on their roof;
- Customers must be located in an AMI deployed area and not have 'opted out' of having an AMI billing meter installed (Each system will have an AMI production meter installed which will provide APS with information on the amount of energy the system is generating.);
- Roofing material <u>must not</u> be clay tile, slate tile or shake shingles and <u>must</u> be in good condition and less than 10 years old; and,
- Service entrance section must have a single-phase meter, must not require upgrades, and will be preferably located in an accessible location.

In addition, if a customer is selected, they must (i) cooperate and work with the APS-selected solar installer to meet the installer's installation schedule; and (ii) notify their homeowner insurance company that the APS-owned system will be installed on their roof.

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APS will reserve a portion of the total PV program capacity for installation on specific feeders in the distribution system that have greater potential to benefit from targeted voltage, VAR, or daytime load-relief services. As described on page 2, all PV systems will be installed with advanced inverters. By targeting a subset of the PV installations on specific feeders, APS will have the opportunity to continue to study the ability of the grid to meet the challenge of higher penetrations of solar within its service area as well as test the ability of solar rooftop systems to provide operating benefits to the APS distribution grid. Participating customers on these select feeders must meet the same requirements listed above.

The Company is now determining which feeders in the APS distribution system would be targeted as mentioned above, and upon approval of the program APS will choose several of these feeders for deployment of residential solar rooftop systems. It is anticipated that most of the feeders identified

will be in the Phoenix metro area; however, the number of qualifying homes and willing customer participants will not be known until the project details are approved.

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In addition to the targeted deployment of systems noted above, APS will work with low income housing agencies to identify a small portion of low income customers who meet most, if not all, of the above requirements. Participating low income customers that have already participated in the APS Limited Income Weatherization Program will have been previously subject to a home inspection to ensure certain structural and electrical standards were met. APS understands that it might need to make reasonable accommodations to the project requirements in order to make sure that low income customers are able to participate. For instance, APS may expand roof orientation requirements to between 180 to 270 degrees.

Combining both the low income and targeted location preferences, APS will directly place no more than one-third of the total number of systems to be installed under the project.

Customer Acquisition and Marketing

Systems installed under this project will be available to a more diverse group of APS customers than the market currently serves, which will require APS to create awareness broadly to customers throughout its service area. Solar options available in the market today require customers to either provide a large initial cash outlay to purchase a system or a high credit score to qualify for a system lease. By contrast, participation in APS's project is based on structural and technical requirements. Because it is not dependent upon a customer's credit score or cash position, the project opens up rooftop solar to many APS customers who would otherwise not be able to install solar on their rooftop. Note that this project is still open to customers with more financial means, who for whatever reason, have not chosen to finance rooftop solar through an unregulated third party.

APS is developing a comprehensive marketing plan that will be adjusted depending on the final details of the approved plan. If and when the project is approved, APS will begin actively reaching out to its customers. Although the project has not been actively marketed to date, immediately after it was filed, APS opened a web page on aps.com for customers to sign up on an interest list (as opposed to a waiting list) to receive updates about the project. As of October 1, 2014, over 1,200 unsolicited customers have indicated interest in APS owned rooftop solar. If the project is approved, APS will email all customers on the interest list notifying them of final project details and instructions on how and when they will be able to apply to participate, as well as the criteria they must meet to be eligible to participate.

Other methods of marketing that may be used, depending on the final project details, include:

- Prominent placement of project information, dedicated web pages, and application links on aps.com;
- Postcard mailers to targeted zip codes to inform customers that the application process is open;
- Messaging in customer communication channels, such as the monthly newsletter, the customer call center, and customer offices;
- Informational brochures and cut sheets with project details for distribution at various customer outreach events, such as trade shows and local community events;
- Door hangers in targeted areas and neighborhoods where systems are being installed;

- Onsite HOA/neighborhood presentations in areas with high interest;
- Social media; and
- Various paid/unpaid media such as news stories, TV & radio appearances and press releases.

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Step 1

Customers wanting to participate in the project will also answer a list of pre-qualification questions, located on aps.com, which will help them ascertain whether they meet the project requirements. Customers meeting the basic criteria for hosting a system will be able to immediately advance to the application screen and begin the process.

Step 2

After a customer application is completed, it will be screened by APS to verify the information provided, including roof orientation, roofing material, home ownership, potential shading, access to the service entrance, customer of record, delinquency status, whether the system will be located in an AMI deployed area, and that the house is a single family detached unit. If the application does not pass the screening, a notification email will be sent to the customer to inform them that they do not meet the project requirements. APS will also recommend to the customer other programs that support renewable energy and other ways to save on energy costs, including incentives that may be available for taking energy efficiency measures and the ability to participate in a home energy audit.

Step 3

Once the application passes through the APS screening, customers will be placed in either the general application pool (approximately 2,000 customers) or the Low Income and targeted feeder pool (up to 1,000 customers) on a first come, first served basis. At that time, a reservation number will be assigned for the project and the customer will be notified. The application will then be assigned to an installer that will conduct an onsite inspection of the property, finalize the system sizing, and place the customer in the installer's queue for installation.

Upon acceptance into the project, the customer will receive an informational welcome packet that will include details of the project, a reiteration of the requirements, contact numbers, and FAQs. Information on APS Energy Efficiency Programs will also be included to make customers aware of other ways to reduce their usage and save money.

Step 4

If more applications for participation are received than is able to be accommodated based on the capacity or budget approved, APS will create a waiting list. In the event of cancellations, customers on the waiting list will be allowed to participate in the program on a first come, first served basis, based on when they submitted their initial application.

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The APS systems will be built by Arizona-based installers that will be selected through a two-step process with oversight by an independent monitor as described below. The first step is an issuance of a "Request for Information" (RFI), which explains the general scope of the project and delineates the basic requirements that installers must meet to participate in the RFP. These requirements include (i) being appropriately licensed and bonded; (ii) having sufficient capacity to meet project timelines; and, (iii) able to fulfill warranty terms. From installers submitting information through the

RFI, a short list of qualified installers will be chosen. Only those installers will be able to participate in the "Request for Proposal" (RFP).

The RFI was issued on Friday, September 5, 2014 and was followed by a bidders' conference call on Wednesday, September 10. The short list of qualified installers selected to participate in the RFP process will be notified shortly after APS completes its analysis of the responses.

The RFP will be issued to the installers selected from the RFI process soon after the project is approved by the Commission. Final details and specifics of the RFP will be developed after the RFI results are analyzed; however, some of the criteria that will be considered are a company's safety record and plan, cost, solar experience, and demonstrated ability to complete projects on schedule.

APS has engaged Merrimack Energy Group, Inc. as an independent monitor to ensure fair RFI and RFP processes. The independent monitor reviewed the RFI before issuance and is also reviewing the criteria that will be used for analyzing RFI responses. If an RFP is issued, the independent monitor will ensure the integrity of the selection process. Upon conclusion of the entire process, the independent monitor will file a report to the Arizona Corporation Commission certifying that APS fairly selected installers using the established objective criteria.

Once the RFP selection process is complete, APS anticipates that installers will be awarded sites in bundles of around 100 systems in five regions of the state—Metro Phoenix, northwest, north central, southeast, and southwest. Installers can be awarded more than one bundle, depending on their credit stability and APS's analysis of their ability to install more than one bundle of 100. Once awarded, installers will be provided with customer information and required to make contact within a specified number of days.

Field Work

Installers will inspect the roof of each assigned customer using an APS provided checklist. If the roof passes the inspection, the site engineering, design, and permitting begin. If the home does not meet the project requirements, it will be replaced by other potential sites in the queue.

Once the site passes the inspection, the homeowner must sign the 20-year easement for the installation to move forward. The easement must be notarized and returned within a set number of days, after which it will be recorded. If the notarized easement is not returned within the required time, the site will be released from consideration.

Miny Credit

When the system installation is completed and the APS meter is installed, the customer will begin to receive the \$30 monthly bill credit. The bill credit will appear as a separate line item at the end of the bill of the active APS account showing a flat \$30 deduction from the total bill amount. If a customer's bill is less than \$30 for any given month, any remaining credit will roll over to the next month. Because designing, testing, and implementing changes to the APS billing system may take six months to complete, a work around will be implemented for customers whose systems are installed before the billing system changes are completed.

It is likely that a customer's billing cycle date will not exactly coincide with the installation date of the PV system installed on their house. If the customer bill is for a period less than a full month, credit will be prorated based on a 30 day period.

The bill credit is available to the APS customer of record at the location where the PV system is installed. In the case where a customer sells their house, the new owner would be eligible for the \$30 monthly credit. The credit would not follow the original participant.

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APS will temporarily remove a hosted system one time during the 20 year easement to allow for roofing maintenance. Customers will pay for any additional removals during the 20 year period. APS will consider on a case-by-case basis customer requests that a system be permanently removed. By requesting a permanent removal, a customer would in effect be requesting to terminate the agreement prematurely and could be responsible for any associated costs. In deciding what to do with any permanently removed facilities, APS will consider the useful life of those assets, among other factors.

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At the end of the 20 year period, APS could:

- 1. Remove the PV system at no cost to the customer; or
- 2. Offer to extend the arrangement with the customer under existing terms or a future arrangement to be determined..

Leading up to the end of the 20 year period, APS will assess the project and the technology used. At that time, the systems will still be producing energy and APS may seek to extend the agreement with the customer. APS will also consider changes in technology that occur over the next 20 years. If appropriate and cost effective, APS may decide to replace obsolete technology or supplement existing technology with additional facilities either during the 20 years or upon completion of the 20 year term.

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APS will enter into a 5 year operations and maintenance (O&M) contract with the solar installers that will include yearly preventative maintenance and a 5 year workmanship guarantee. Before the end of the 5 year period, APS anticipates that it will contract the O&M for the remaining 15 years of the easement, most likely for contract periods of three to five years. Additionally, the panels will be protected by 25 year manufacturer warranties and the inverters by 10 year warranties.

Each system will be designed from the available roof space and orientation and will have an expected kWh output. Each system will also have a production meter installed, which will provide APS with information on the amount of energy the system is generating. APS will have the installer investigate decreases in production according to the terms of the O&M contract. There will not, however, be a guaranteed production requirement.

At the current time, the protocol for communicating with the advanced inverters is still being developed. APS will not be communicating with the inverters at the time of installation. The expectation is the communication backbone will be in place over the next 18 to 24 months. All of the inverters will be installed on the outside of the house. Placement of the advanced inverter will depend on various onsite factors, including location of the existing customer billing meter and other external electrical equipment that may be present.

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APS will procure insurance to cover third party bodily injury, personal injury, and property damage caused by or sufficiently related to the DG panels. In addition, APS purchases property insurance that covers APS owned property and assets including, among other items, vandalism.

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Although there are some similarities between this project and the Flagstaff Community Power Project (CPP), there are key differences. The CPP was a research project, conducted with the Department of Energy, to test what happens when a large amount of distributed solar is installed on a single, relatively static feeder. The proposed residential rooftop project, however, is not solely designed as a test of feeder impacts and is available to customers throughout the APS service area on any number of feeders. The PV systems installed under the CPP are also much smaller systems than those anticipated to be installed under the proposed AZ Sun DG filing. We expect that most of these systems will be in the 7 kW range.

Another key difference between the projects is the billing structure. CPP customers were given their own special rate associated with the solar installed on their homes. The proposed rooftop project is a very simple billing structure giving a fixed \$30 monthly credit to customers. Under this proposal, customers are able to stay on their current rate, or switch to one that better fits their needs, without affecting the value proposition associated with this project.

The cost structure of the two projects is also different. CPP included facilities and expenses associated exclusively with the research aspect of the endeavor. As a result, CPP was a relatively more expensive project.

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This rooftop solar proposal does not hinder competition in the solar industry, and will in fact promote a healthy Arizona installer community by providing a platform for installers to bid into the project's competitive RFP. In addition, the project does not seek to displace any existing solar market model. Instead, it offers a different way to participate in rooftop solar resources and is directed at all customers, including those with low credit scores whom the market does not currently serve. The project expands the number and type of solar options available to customers. At the same time, it will help support the local installer market in an innovative way that maintains Arizona's solar leadership.

APS believes that within certain customer segments there is robust competition among rooftop DG installers. Individuals who can pay cash for PV systems, or who have a high credit score that will allow them to acquire a loan or enter into a lease, are well served. APS customers outside these groups are not being served by the market and have few options for installing solar.